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AUTHOR(S):

Matisoff, James A.

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Tangkhul Naga and Comparative Tibeto-Burman

by

James A. MATISOFF*

Abstract

After reviewing Bhat's book, an attempt is made to illustrate the kind of contribution such well-recorded data can make to Tibeto-Burman studies in general. PTB initial velar clusters are examined in this context, with especial attention to the complicating role of prefixes. Various features of the PTB syllable-final where Tangkhul data is of interest are discussed, followed by some remarks on Tangkhul reflexes of proto word-families.

I Introduction

The crucially important and ramified group of Tibeto-Burman languages known variously as Kukish, Kuki-Chin, or Kuki-Chin-Naga, spoken in Assam and Western Burma, have long been something of a terra incognita. Benedict and Shafer (1940–1), deviating somewhat from the classification offered in the *Linguistic Atlas of India* (Grierson 1904), subdivide Kukish into no less than eight distinct smaller groups: Central Kuki, Northern Kuki, Old Kuki, Southern Kuki, Western Kuki, Northern Naga, Southern Naga, and Luhupa. The most useful Kukish language for comparative purposes has hitherto been Lushai (Central group), both because of the ample and well-recorded data available (Lorrain, Bright) and because of the many archaic features it preserves (contrastive vowel-length before consonants, retention of final *-l* and *-r*, etc.). Another key language has been Tangkhul or 'Tangkhul Naga' (Luhupa group), thanks to the voluminous dictionary of Pettigrew (1918).[1] The importance of Tangkhul has now been increased still further by the work under review.[2]

II Internal Critique of the Tankhur Naga Vocabulary.

Bhat's book has four parts. (a) In the brief Introduction (ix–xii) some basic phonological and grammatical information is provided. TN has seven vowels (*i, ɯ, u; e, ə, o; a*) and 17 syllable-initial consonants (stops *p, t, k* and *ph, th, kh*; affricates *z* [t^s] and *c* [t^š]; spirants

* Professor of Linguistics, University of California, Berkeley, U.S.A.

1) It is curious that Bhat nowhere makes mention of this earlier book. In what follows, forms cited from Pettigrew will be marked (P). Tangkhul Naga is abbreviated as TN. We continue to refer to this language as 'Tangkhul' rather than by Bhat's name 'Tankhur'.

2) D.N. Shankara Bhat. *Tankhur Naga Vocabulary*, Deccan College, Poona, 1969, xii+100pp.

s, *ś* [š], *h*; nasals *m*, *n*, *ŋ*; and *w*, *r*, *y*). /p t k/ become voiced intervocalically, especially before a vowel under the low tone. The phoneme /r/ is realized indifferently either as a trill [r̃] or as a lateral [l].[3] The fricative /h/ has [f] as an alternant before */ɯ/*, reminding one of Japanese and of the history of Loloish (PLolo **hwak* 'rat' >Lahu *fâ*ˀ). There are three tones, high-falling /ˊ/, low-falling /ˋ/, and an unmarked tone, presumably mid.

Bhat does not go on to analyze the structure of the TN syllable, though this is a rewarding enterprise. Syllables may end in one of 9 consonants: *p*, *t*, *k*; *m*, *n*, *ŋ*; *w*, *y*, *r*. Six of the vowels (all except */ɯ/*) may occur before the final stops, nasals, and *–r*. Before *–y* one finds only the non-front vowels /ə a u o/. As one would expect, the back vowels /u o/ do not appear before *–w*, but neither does /i/. These facts strongly suggest that the seventh vowel '*ɯ*' is to be analyzed as an underlying diphthong /iw/. Indeed, in the entire vocabulary */ɯ/* is never found to occur before any consonant, except in the single item *əmənɯt* 'laughter' (p. 24), where the *–t* is clearly suffixial (cf. *khəmənɯ* 'to laugh').[4]

The rest of the Introduction mentions a few grammatical points,[5] most interesting of which are the verbal prefixes *ŋə–*, *mə–*, *pə– ~ phə–*, *kə– ~ khə–*, and *ci– ~śi*. The alternations in the non-nasal prefixes are conditioned by the voicing of the root-initial consonant, such that *pə–*, *kə–*, and *ci–* appear before voiceless consonants, while *phə–*, *khə–*, and *śi–* are found before voiced ones.[6] This in itself is strong evidence that TN *ś* is sometimes the reflex of a voiceless palatal affricate, even though such a proto-initial is very poorly attested by the comparative data in root-morphemes.

(b) The main body of Bhat's book is the TN-English vocabulary (1-72). The phonetic quality of the transcription of the TN forms is uniformly excellent, and there seems never to be any reason to doubt their accuracy (except in the case of obvious misprints). But again, Pettigrew was also no slouch as a phonetician, despite his rather infelicitous choice of symbols, and in fact the two transcriptions are readily interconvertible. Thus Pettigrew uses 'a' for Bhat's 'ə', 'ā' for Bhat's 'a', 'a̱' for Bhat's 'ɯ', and 'ei' for Bhat's 'əy'.[7] Pettigrew

3) Pettigrew also mentions some *l ~ r* alternations (p. 4), but his dictionary, though based on the same standard 'Ukhrul' dialect as Bhat studied, systematically keeps /r/ and /l/ apart, which indicates that the merger is of quite recent date. Pettigrew spells both 'Tangkhul' and 'Ukhrul' with *–l*, but Bhat uses *–r* for the former while retaining *–l* for the latter (ix). Somewhat different is the case of *w* vs. *v*. Pettigrew reflects a subphonemic distinction, writing *w* before / o u / and *v* otherwise. Bhat uniformly uses *w*, without comment.

4) The comparative evidence (see below) indicates that TN *ɯ* is sometimes, though not always, the reflex of the old diphthong **uw*.

5) Pettigrew devotes 105 pages to TN grammar, much of which is quite valuable, though admittedly superficial by modern standards.

6) The TN *c ~ ś* alternation is closely analogous to the situation in Jinghpaw (Kachin), where the causative prefix *šə–* is realized as *džə–* before sibilants and aspirates (Hanson 221). The TN affix *ci– ~ śi–* also conveys a causative or transitivizing meaning, and is clearly cognate to the Jinghpaw prefix, as well as to, e.g. the Lahu causative auxiliary verb *ci*.

7) Indeed, Pettigrew's use of *a* and *ā* instead of *ə* and *a* reflects the actual historical reality. Thus, 'weep' (P) *cap*, (Bhat) *cəp*<PTB **krap*, while 'shoot' (P) *kāp*, (Bhat) *kap*<PTB **ga·p*. See below.

already clearly recognized the three-way TN tonal contrast of high-mid-low ('As in Manipuri, there are two noticeable changes in intonation in TN, a high and low tone to a great number of words which to the ignorant sound the same.' [p. 4]), though he makes no attempt to mark these systematically, 'as these differences can only be learned by ear' (ibid). In those cases where Pettigrew does mark the tone, they do not always agree with Bhat's transcription. Thus both writers agree that 'red' is high (*húŋ*) and 'neck' is low (*hùŋ*), but Pettigrew distinguishes between 'give' (low) and 'mankind' (high), while Bhat has mid-toned *mi* for both. In any event, it is obvious that tone does not play as vital a role in distinguishing TN utterances (or Kukish utterances in general) as it does in such phonologically degenerate branches of Tibeto-Burman as Lolo-Burmese. In spite of clear contrasts (e.g. *athəy-ru* 'fruit juice' vs. *athəy-rú* 'fruit pip'), there is much tonal variation among different occurrences of the same morpheme according to the particular compounds in which it appears.[8]

The entries in the Vocabulary are arranged in an alphabetical order modelled on that of Sanskrit, according to the position and manner of articulation of the syllable-initial consonant, with the velars coming first.[9] The vowels are alphabetized in the order *ə*, *a*, *i*, *u*, *ɯ*, *e*, *o*. A real innovation is Bhat's convenient system of arranging the words in the alphabetical order of their root-syllables, with their prefixes stripped off.[10] Groups of compounds containing distinct though homophonous roots are set off from each other under each head-syllable by separate Arabic numerals. For example, there are 12 different word-groups under the head-syllable *hɯ*(70). In general one can readily agree with Bhat's morpheme identifications, though sometimes they seem a little fanciful, or just plain wrong. Thus the first subgroup under *hɯ* contains the four strange bedfellows *kəhɯ* 'to thatch', *məyhɯ* 'bonfire', *caŋhɯ* 'soot in the kitchen', and *kəhɯ* 'to spread out (parasitic plant)'. Why not group 'soot' with, say, the compound *cihɯ* 'dust', given as the eighth of the 12 *hɯ*-groups?

The glosses themselves are detailed, and seem usually to be quite accurate, though occasionally they leave something to be desired. There are times when they are so overspecific that one suspects that Bhat is merely translating them as they appeared enshrined in the context of a particular elicited text, and has not extracted the core meaning of the word. Thus *khərín* 'to have pain due to some hard thing in the bed' (45);[11] *kəkətho* 'to tuck in mud just near the nest inside a rat's hole' (21);[12] *kəkhənəm* 'to evade paying back debts by telling lies' (22), etc. A serious mistake is the gloss of *pəy* as 'liver' (26). This

8) As Bhat puts it (ix), 'Since the tonal feature did not appear to be stable in word formation, and since no general rule could be formulated for its alternation, it has generally been neglected in the identification of roots, except when the difference in meaning appeared to be rather substantial.'

9) This is a practice of which the reviewer heartily approves, and has adopted in his *Lahu-English Dictionary* (forthcoming).

10) Pettigrew never analyzes his words into their constituent morphemes, so that, e.g. all the verbs in his dictionary are listed under *k-* or *kh-*, since they are cited with the infinitival prefix *kə-* ~ *khə-*. A further advantage of Bhat's presentation is that he cross-lists compounds under each constituent root.

11) Pettigrew glosses this as 'to feel anything underneath one when sitting down' (322).

12) This word appears in the same-numbered subgroup under *tho* as *kətho* 'eat well' and *śathokəhay* 'be very thick'.

word clearly means 'spleen', as attested by Pettigrew and by such cognate forms as Lahu *ɔ̀-pe* and Angami Naga *ú-prì* (Burling). The real TN word for 'liver' is *amathin* (Lushai [L] *thìn*, Written Burmese [WB] *əsâñ*, Jinghpaw [Jg.] *məsìn*, Written Tibetan [WT] *mtšhiṅ*, etc.). This form is lacking in Bhat, but appears in Pettigrew.

Understandably enough, the English glosses contain a fair number of misprints and awkwardnesses of style, which sometimes seriously impede understanding. Thus *khəŋətor* 'to have boils (due to fire)' [p. 18; blisters?]: *khəməhak* 'to be chocked' [p. 67; fortunately Pettigrew supplies the gloss 'to choke']; *phəykhəŋərok* 'to express each other' [p. 50; Pettigrew has *pheikhaŋaphok* 'to strip'; does Bhat mean 'to undress each other'?].

(c) The third section of the book is an unanalyzed list of words entitled 'Additional Vocabulary' (AV: 73–83), consisting mostly of plant and animal names with unilluminating glosses like 'kind of tree' and 'kind of fish'. It is hard to see what criteria Bhat used to determine what words should appear in the AV rather than in the main vocabulary (MV). Thus *karkawphan* 'spiderweb' appears under the syllable *phan* in the MV, while *karkaw* 'spider' is to be found only in the AV. Three kinds of eagle (*raŋtik, raŋpop, raŋca*) are listed under *raŋ* in the MV, but two others (*khəraŋ, khəraŋsəśa*) are given only in the AV. The names of the months of the year are divided about equally between the two lists, etc. Most disconcerting, hidden away among all the flora and fauna in the AV are some of the most important words in the language for comparative purposes: 'six', 'seven', 'ship', 'horse', 'elephant', etc.

(d) The book concludes with a useful 'Root Index of English Meanings' (84–100). As Bhat says in his introduction, this index is 'neither exhaustive nor exact ... and its purpose is only to provide an easy cross-reference to the main vocabulary'. In a few cases, a word given in the index is not to be found at all in the MV (*sam* 'steep' [98]; *cat* 'raw' [95]), or else is found with a different spelling ('hoof': *hò* [index] but *śò* [MV]).

In sum, then, Bhat's book is a valuable source of raw data on TN, an important check on and supplement to Pettigrew. It does not purport to be anything more. No historical-comparative remarks are ventured anywhere, no attempt is made to distinguish loanwords from native items, and nothing is said about the vocalic and consonantal alternations in TN 'word-families' (see below).

III The Contribution of TN to Tibeto-Burman Studies

Comparative Kuki-Chin (KC) studies are so far quite modest in scope.[13] This is not

13) Benedict (*Sino-Tibetan linguistics*, vol. 14) assembled all the primary sources on these languages then available, but did not try to reconstruct syllable-initial consonants, confining himself to a study of the 'rhymes', and in fact not even considering those rhymes that end in nasals. More recently (1965) the Japanese scholar Ono Tōru has used newer materials from eight closely related KC languages (not including Tangkhul) to arrive at 'Common Kukish' initial consonant reconstructions, but without attempting to integrate his results into a broader Tibeto-Burman framework. Also of interest are the unpublished comparisons of Mundhenk 1968, 1969.

the place to undertake anything more ambitious in this regard, though perhaps we can indicate the dimensions of the task by a brief discussion of the TN reflexes of proto-Tibeto-Burman (PTB) *velar initials, followed by some remarks on the contributions TN data can make to the reconstruction of PTB vowels and final consonants.

1. TN and the PTB system of initial consonants.

PTB syllables had a canonical shape roughly like $(P)C_i(G)V(C_f)$, where P represents one of eight prefixes of largely obscure morphological import (*g-*, *d-*, *b-*, *m-*, *r-*, *l-*, *s-*, *ʔ-*);[14] C_i a large class of root-initial consonants; G a glide (*-y-*, *-w-*, *-r-*, *-l-*); V one of perhaps three vowels (*a*, *i*, *u*); and C_f a syllable-final consonant (*-p*, *-t*, *-k*; *-m*, *-n*, *-ŋ*; *-r*, *-l*; *-s*; *-y*, *-w*).[15] Note that despite the fact that dozens of modern TB languages have contrastive tone, there is no justification for imputing any tonemes to the proto-language. Tones have arisen in TB (and doubtless arise in general) through the influence of the syllable-initial and/or syllable-final consonants (Matisoff 1970, 1971). Indeed, all the elements in the TB syllable are highly interdependent. It is traditional in Sino-Tibetan studies to divide syllables into 'initials' and 'rhymes', where the latter refers to the whole syllable minus the initial consonant(s). Yet as far as influence on neighboring segments is concerned, there is no principled basis for assigning the proto-glides to the initial as opposed to the rhyme, or vice versa. A **-y-*, for example, may either palatalize the preceding consonant or front the following vowel, or both.

What makes the reconstruction of PTB initials so difficult is the unpredictable way in which the prefixes may interact with the rest of the syllable (the 'root') through time. In a given daughter language a particular proto-prefixed syllable may (a) retain the prefix in its presumably original form, with an epenthetic shwa before the C_i; or (b) substitute a different prefix for the 'original' one;[16] or (c) drop the prefix entirely, with no trace; or (d) retain the prefix but drop the C_i;[17] or (e) fuse the prefix with the C_i. (This latter development is especially common when the C_i is a resonant.) Thus a hypothetical etymon **g-ya* could develop into, say, *kəya* (prefix-retention), *pəya* (prefix-substitution), *ya* (prefix-dropping), *ka* (prefix-preemption), or *dža* (prefix-fusion).[18] While the various daughter languages

14) See Wolfenden 1929 and Matisoff 1971. It seems obvious that these prefixes were regularly realized with an unstressed shwa-like vowel before the root-initial consonant, as e.g. in modern Tangkhul or Jinghpaw.

15) This is something of an oversimplification, since *-s* could occur syllable-final after other consonants.

16) It is of course often impossible to say whether a daughter language has really innovated, or whether the proto-language itself hesitated between alternative prefixes, as in e.g. 'three' Written Tibetan (WT) *gsum*, TN *kəthum* (<**g-sum*), but Jinghpaw (Jg.) *məsum* (<**b-sum*); 'six' WT *drug*, TN *thəru* (<**d-ruk*), but Jg. *krúʔ*, Written Burmese (WB) *khrok* (<**g-ruk*).

17) E.g. 'seven' **s-nis* (cf. Jg. *sənìt*)>Lahu *šə̀*, with nothing left of the C_i *n-*.

18) A further possibility is that the fused syllable will then be re-prefixed (e.g. *mədža*). Similarly, there is nothing stopping a prefix-loving daughter language from adding a prefix to a root that had never had one at all.

and language families show certain general preferences in the way they treat prefixes, there is no way of predicting how a particular prefixed etymon will fare in a given language (at least in the present state of our knowledge).

Since there is such a rich array of possible $P+C_i+G$ combinations, it is not surprising that many correspondences involving non-simple initial consonants are unique. For example, we are not likely to find too many words exemplifying the proto-initial combination *_s-hw_. In fact, only one has so far been discovered ('blood' *_s-hwiy_). Yet this etymon is amply attested throughout Sino-Tibetan, and there is no reason to doubt the reconstruction of its initial.

Tangkhul Naga reflexes of PTB velars. We need reconstruct only two manner-series of PTB stops, *voiceless and *voiced. In Tangkhul (as in Lushai, Jinghpaw, and Written Burmese) the old *voiceless series becomes aspirated, while the *voiced series loses its voicing. Thus *_k_> TN, L, WT, Jg., WB _kh_; Lahu (Lh.) _qh_: (1) 'bitter' *_ka_> TN _kha_, L _khàa_, WT _kha_, Jg. _khá_, WB _khâ_, Lh. _qhâ_; *_g_ > TN, L, Jg., WB _k_; WT _g_; Lh. _q_: (2) 'scorch/roast' *_ga·ŋ_ >TN _kaŋ_, L _kàaŋ_, Jg. _kəkaŋ_, WB _kaŋ_, Lh. _qɔ_.

Moving on to syllables with *prefix+velar (but no following glide), we see that 'chaque mot a son histoire': In (3) 'twenty' *_m-kul_, TN _məku_ (along with Ao Naga _mətsə_ and Mikir _iŋkoi_ < *_imkoi_) reflects the nasal prefix,[19] though this is absent from Jg. _khun_ and Garo (Ga.) _khol_; contrariwise, in (4) 'head', the TN form _kúy_ shows no prefix, though both *_m-_ and *_s-_ are attested elsewhere (WT _mgo_, Digaro _mkau_ < *_m-gow_; Ga. _sgo_, Dimasa _səgau_ < *_s-gow_). In (5) 'nine' *_d-guw_ (WT _dgu_), both Tangkhul and Jinghpaw show palatalization of the dental prefix (Jg. _džəkhû_, TN _ciko_ [with restressing]).[20]

In syllables with *velar+glide, the Tangkhul developments are complex.

a) Before a non-front vowel, *_kw_ > TN _kh_: (6) 'hoof' *_kwa_ > TN _akho_, WB _khwa_, Jg. _kha_ 'heel'; (7) 'bee' *_kwa·y_ > TN _khuy_, L _khuai_, WB _kwài_. Before *_i_, *_kw_ > TN _h_: (8) 'dog' *_kwiy_ > TN _hu_, L ʔ_ŭy_, WT _khyi_, Jg. _gwì_, WB _khwê_ **Lh. _phî_**;[21] (9) 'elephant' *_m-kwiy_ or *_m-gwiy_ > TN _məhu_, Jg. _məgwì_.

b) The normal Tangkhul reflex of *_kr_ is _c_ [tš]: (10) 'weep' *_krap_ > TN _cəp_, L _tràp_~ _ṭap_, WT _khrab-khrab_ 'crybaby', Jg. _khràp_, Ga. _grap_; (11) 'fear' *_kri-t_ > TN _ci_, L _ti_, Jg. _khrìt_: (12) 'horn' *_kruw_ > TN _ci_, WB _khrui_, Lh. _khɔ_.[22] (13) In the set for 'foot', which we tentatively reconstruct as *_krwiy_, Tangkhul (and also Angami Naga) have labials, while Lushai and Lolo-Burmese have velars:[23] TN _phəy_, Angami _ú-phì_; L _kèe_, WB _khre_, Lh.

19) Note that the prefix blocks the aspiration of the C_i in Tangkhul.

20) Contrast TN _thəru_ 'six'<*_d-ruk_. It almost looks as if two different dental prefixes, say *_t-_ and *_d-_, are to be reconstructed for some stage of pre-Tangkhul. Or are the divergent developments to be accounted for by the difference in the C_i's? The vowels of both the TN form and L _pà-kŭa_ reflect an alternant *_gwa_.

21) One is reminded of the various developments of PIE *k^w in Greek (_p_, _t_, or _k_), depending on the neighboring vowel. The Lahu _ph_ reflex here seems to be unique. See 'foot' (13).

22) Another possible set, of uncertain validity, is 'count' *_b-graŋ_ ~ *_krak_>WT _bgraŋ_, TN _cak_.

23) This reminds us of the Lahu reflex of 'dog' (8).

khɨ. (This is to be contrasted with (14) 'rat' **g-r-wak* > WB *krwak*, Lh. *fâ*ʔ, TN *śi-wok*, where both the *g-* and the *r-* are prefixial.) In (15) 'scratch' **kret* (Jg. *məkhrèt*, WB *khrac*), Tangkhul has dropped the glide entirely (*khet* 'strike a match'). The TN reflex of the voiced cluster **gr* is *ś*:[24] (16) 'hear' **gra* > TN *śa*, WB *krâ*, Lh. *kâ*; (17) 'cool/cold' **graŋ* ~ **grak* > TN *śaŋ*, L *taŋ-thoˑm*, WT *graŋ*; Atsi (Burmish) *kyo*ʔ, Lh. *kâ*ʔ. In several other superficially similar words, a velar+*r* combination in other languages corresponds to a simple *r* in Tangkhul, indicating that the velar is prefixial: (18) 'bone1' **g-ra* > TN *aruˑ ara* 'bones of all sorts' (elaborate expression), Jg. *ǹrút ǹra* 'id.',[25] WT *gra-ma* 'fishbones'. In the Lahu form *ɔ-ká-ku* 'bone', the prefix has fused with the root (**kr* regularly > Lh. *k*, while **k* > Lh. *q*). Similarly, (19) 'ant' **g-ri-n* ~ **g-yi-n* > TN *rəy-śa* 'white ant', WT *gre-mog-ḫbu* 'ant, emmet', Jg. *kəgyin* 'white ant'.

c) There is good evidence that **ky* and **gy* developed conversely in Tangkhul from **kr* and **gr*; i.e. **ky*>TN *ś*, and **gy*>TN *c*. Thus, (20) 'burn/scorch' **kyit*>TN *śit*, WB *khyac*, Lh. *chîʔ*; (21) 'parrot' **gyi*>TN *hut-ci*, L *và-kǐi*, OB *kyê*, Lh. *p̀è-cê-qā*. The word for (23) 'house' **kyim*~**k-yim* has had a more complex history. Some languages have treated the initial as a fused unit (WT *khyim*, TN *śim*, Nung *kyim*~*tśim*), while others analyze the *y* as the C_i, chopping off the velar as if it was a prefix: L *ʔin*, WB *ʔim*, Lh. *yè*. Similarly with (24) 'right (side)', **g-ya*~**g-ra*. It seems certain that this velar prefix derives from a metanalysis of the compound **lak-ya* 'right hand'.[26] Tangkhul and Burmese both have *ya*, reflecting the uncontaminated root. Jinghpaw *khrá* (pronounced without a shwa) and Lahu *ša* show fusion of the prefix with the C_i.[27] The prefix retained its separate identity in the WT form *gyas*, which must have been pronounced [gəyas], since the *y* is written on the line and not as a subscript. Finally, in the word for (25) 'ashamed' **g-yak*~**s-rak*, TN *khəyək* and Jg. *kəyàʔ* show retention[28] of the velar prefix; WB *hrak* and Mikir *thərak* testify to the alternate *s*-prefix; while L *zak* and Lh. *yàʔ-tɔ* reflect prefixless prototypes.

d) Most intricate of all are etyma where the velar initial is both preceded by a prefix and followed by a glide, or where a velar is followed by two more consonants.[29] To start with a relatively simple case, (26) 'twist' **d-kri(y)*~**b-kri(y)*: WT *dkri*, *bkri*; Jg. *k(h)ri*, *məkhri*: TN *kəkhəri* 'twist in (as a screw)', *kəŋərəy* 'twist back on itself'. Tangkhul here treats the *r* as the C_i, so that the original velar C_i gets reanalyzed as a prefix while the original *d*~*b* prefix is dropped. The TN *i*~*əy* alternation reflects a proto-variation between short and long **i* (see below). In (27) 'hair' **s-kra*>TN *a-há* 'feather, fur, body-hair', WT *skra*

24) It will be remembered that Tangkhul lacks a voiced palatal affricate, which destroys the parallelism with **kr*>TN *c*. See also 'dove' (32).

25) For a reconstruction of the first word in these expressions, see 'bone2' (68).

26) For some discussion, see Matisoff 1969.

27) The regular Lahu reflex of plain **y* is *y*: 'take' WB *yu*, Lh. *yù*.

28) The *khə-* in the TN form is not the usual 'infinitival' prefix that automatically gets preposed to every verb. The infinitive of this verb is *kəkhəyək*.

29) See also 'foot' (13) and 'rat' (14).

'hair of head', Jg. *kərá* 'id.', Jinghpaw has dropped the *s-* and reanalyzed the *k* as a prefix, while Tangkhul has fused the whole **skr* cluster into *h*. Note that we must assume the existence of the *s-* at some point in pre-Tangkhul, since a plain **kr* would have become TN *c*. In (28) 'village' **grwa-ŋ*>TN *khu*, L *khúa*, WB *rwa*; WT *groŋ*, Bisu (Loloish) *khɔ̀ŋ-ba*, the velar has been treated like a prefix in Burmese and dropped, while in Tangkhul and Lushai it is the *r* that has been driven out by the velar, after influencing the vowel quality of the TN form. (The usual TN reflex of **–wa* is *–o*; cf. 'hoof' (6) and (29) 'grass' **r-tswa*> WT *rtswa*, TN *wo*, L *hlo*.) The velar is clearly prefixial in the set for (30) 'bamboo', which we provisionally reconstruct as **g-pra* or **g-pwa*>TN *kəha*, Jg. *kəwá*, Mikir *kepho*, Angami *kèriê*, L *rua*, WB *wâ*, Lh. *vâ*; WT *spa*～*sba* 'cane', Nung *thəwa*. (The WT and Nung forms reflect an alternant with the *s*-prefix.) The *h* in Tangkhul is paralleled in (31) 'pig' **pwak*> TN *hok*, WT *phag*, L *vòk*, Jg. *wá*ʔ, WB *wak*, Lh. *và*ʔ.[30]

In three interesting roots ('dove', 'bile', 'skin') a *kr*-cluster must have been preceded by the *m*-prefix. Yet again, each individual case has to be discussed separately. In (32) 'dove' **m-kruw*, Jg. *khrū*, Ga. *kru*, and WB *khrûi*～*khyûi* show no trace of a prefix, though this is abundantly attested by Miri *pəkü* (< **mə–*), Khami *iŋ-məkhu*, Angami *məkru*,[31] Lh. *gû*,[32] and the curious TN form *nasha* (P), which would be *nəśu* in Bhat's transcription.[33] The second syllable of the Lushai form *và-húuy* is also cognate. The set for (33) 'bile', **m-kri-k/t*～**s-kri-k/t*>WT *mkhris* (< **mkrids*), West Tibetan *thigs-pa*, TN *sa-thik*, Jg. *šəgri*, Lh. *ɔ̀-kɨ́*, exhibits a variation between final dentals and velars that is widespread in Tibeto-Burman after front vowels. The TN, Jg., and Lh. forms point to the *s*-prefix (which is often used in words denoting animal matter[34]), rather than *m–*. The dental in Tangkhul is to be explained as an assimilatory development of **kr*>**tr*>*th*. (The retroflexed initial in the West Tibetan form attests to the reality of this intermediate stage.) The most speculative set in this group is (34) 'skin' **m-krwɨ*>TN *a-huy*, WB *ərɛ*, Lh. *gɛ̀*. So far the only direct evidence for the nasal prefix in this word is the voicing of the Lahu initial.

In three other roots ('eight', 'hundred', 'penis'), an *rgy*-cluster is to be reconstructed: (35) 'eight' **b-r-gyat*>TN *ciśət*, L *riat*, WT *brgyad*, Jg. *mətsát*, WB *hrac*, Lh. *hí*. When dealing with a cluster of this complexity, it is obviously putting too fine a point on things to presume to trace the exact order of developments in each language. It does seem, however, that the immediate ancestor of the TN form is **gyrat*, with the **gy*>TN *c*, as is regular (see 'parrot' [21]), and the *cər–* combination then evolving to *cəś–* via an intermediate retroflexed

30) There is nothing strange in the development of *h* from a labial stop. The same thing has happened in the history of Japanese.

31) This form is cited by Benedict, but does not appear in Burling's word-list.

32) We have shown in detail elsewhere (Matisoff 1971) how the Lahu voiced series of obstruents derives from the Proto Lolo-Burmese prenasalized series.

33) Bhat gives only *śukər* 'kind of small dove' and *śupuy* 'kind of big dove' (58).

34) This animal prefix is simply a reduced form of the omnipresent Tibeto-Burman root **sya* 'animal/meat' (cf. TN *sa*).

stage, **cəṣ–*.[35] The Lushai form seems rather to come from **g-ryat*. Somewhat different is (36) 'hundred' **r-gya*>TN *śa*, L *zàa*, WT *brgya*, Jg. *lətsa*, WB *ra*, Lh. *ha*. The WT initial is the same as in 'eight', but the *b–* looks like an analogical addition under the influence of the latter, since the Jinghpaw, Lushai, and Burmese initials are not the same in the two words. Lushai *z* is the regular reflex of **y* (cf. [37] 'sell' **ywar*>TN *yòr*, L *zùar*), which suggests a pre-Lushai form **gr-ya*. The same TN *ś*: L *z* correspondence is found in (38) 'penis' **rgyaŋ*>TN *shaŋkui* (P), L *zang* (Lorrain), which leads us to set the root up with **rgy–*. This is corroborated by the Garo form *ri-gaŋ*.

The most involved (not to say tortuous) set of all is the word for 'star' (39). The WT *skar* and Jg. *šəgan* straightforwardly reflect a **s-kar* prototype. The Tangkhul, Lushai, and Khami forms, however, all have two full syllables, one of which is *si*.[36] In Lushai and Khami the *si* comes second (L *ʔàar-si*, Kh. *ka(r)-si*~*a-si*),[37] but in Tangkhul it comes first: *si-ra*. What may have happened is this: the pre-TN compound **si-kar* (which had competed in Proto-Kukish with **kar-si*) developed an 'echo-vowel', becoming **si-kara*.[38] The first *a* then lost stress, becoming shwa, so that the resulting *kə*-was reinterpreted as a prefix and was dropped, yielding *si-ra*. The WB form *kray* exhibits metathesis of the *a* and the *r*,[39] as does the second syllable of Lh. *mə̀ʔ-kə*.

All in all, we see that Tangkhul Naga is of great value in the elucidation of the prefixial dynamics of these etyma, and in fact preserves the PTB prefixes much better than Lushai.

2. Tangkhul Naga and the PTB system of rhymes.

As Benedict demonstrated as early as 1940 (*Conspectus*), Proto Tibeto-Burman had basically a three-vowel system, with a length-contrast for the high vowels. Phonetically the long vowels were probably diphthongs when no further C_f followed, thus: **i*/**iy*, **u*/**uw*, **a*. When we add to these the diphthongs **ay* and **aw*, we come out with quite a symmetrical proto-system. (The low vowel **a* had a length distinction only before consonants, including **–y* and **–w*.) Complicating the picture are a small number of roots that seem to reconstruct with the mid-vowels **e* and **o* (see below).

35) For the restressing of the shwa, see 'nine' (5).

36) Tempting as it might seem, this syllable cannot be identified with the morpheme **siy* 'fruit/small round object', since **s–* regularly becomes *th* in both Tangkhul and Lushai. See set (41).

37) The Lushai initial *ʔ–* is unexplained.

38) This is not as far-fetched as it sounds. Thus the word for 'I' is *ŋa* or *ŋai* throughout most of Tibeto-Burman, but Bodo and Garo have *aŋ*, as do the languages of the Bahing-Vayu group (Rai, Limbu, etc.). If these forms are all cognate, one way to relate them would be to assume an intermediate form with an echo-vowel **aŋa*. Another possible example is 'sleep', which is *ip*, *yip*, or *yup* in most TB languages, but is *pi* in Tangkhul (*ip>*ipi>*pi). Burling 1961 has pointed out that Garo develops echo-vowels in the environment of glottal stop.

39) This is common enough in Indo-European in the environment of liquids. Cf. Greek *kardia* ~ *kradia* 'heart', etc.

Vowel length: Tangkhul Naga is just as valuable as Lushai, Tibetan, Burmese, or Lahu in reflecting the contrast between **i* and **iy*: **i*>TN *i*, L *ii*, WT *i*, WB *e*, Lh. *i* ([40] 'die' **si*>TN *thi*, L *thii*, WT *śi*, WB *se*, Lh. *ši*): **iy*>TN *əy*, L *ey*, WT *e*, WB *i*, Lh. *i* ([41] 'fruit' **siy*>TN *thəy*, L *thěy*, WT *se*, WB *sî*, Lh. *šī*. On the other hand, **u* and **uw* have merged to TN *u*, though they have been kept apart in Burmese: **u*>WB *u*, TN *u* ([43] 'thorn' **tsu*>WB *chû*, TN *sù* 'to prick'): **uw*>WB *ui*, TN *u* ([32] 'dove' **m-kruw*>WB *khrûi*, TN *śu*). Tangkhul apparently offers no evidence to distinguish **aw*/**a·w* or **ay*/**a·y*, or such other rhyme-pairs with consonantal finals as **il*/**i·l*, **ul*/**u·l*, or **ar*/**a·r*. For all these, we are still dependent on the testimony of Lushai:

**aw*>TN *aw*, L *aw* ([43] 'grasshopper' TN *kháw*, L *khaw*) vs. **a·w*>TN *aw*, L *aaw* ([44] 'fat/grease' TN *thaw*, L *thàaw*):[40]

**(w)ay*>TN *uy*, L *ey* ([48] 'left side' TN *wuy*, L *věy*) vs. **(w)a·y*>TN *uy*, L *uay* ([49] 'fade/wither' TN *hùy*, L *vúay*):

**il*>TN *i*, L *i* ([50] 'gums' TN *ha-ri*, L *ha-hni*) vs. **i·l*>TN *i*, L *iil* ([51] 'guts' TN *khəri*, L *ríil*):

**ul*>TN *u*, Jg. *un* ([3] 'twenty' TN *məku*, Jg. *khun*, Ga. *khol*) vs. **u·l*>TN *u*, Jg. *o*, L *uul* ([52] 'snake' TN *phəru* L *rúul*, Jg. *məro*, WT *sbrul*):

**ar*>TN *ər*, L *ar* ([53] 'new' TN *thàr*, L *thár*) vs. **a·r*>TN *ər*, L *aar* ([54] 'fowl/chicken' TN *hər*, L *ʔáar*).

In many other rhymes, however, especially those with stopped or nasal finals, the TN reflexes are sensitive to the length of the proto-vowel. In these cases the testimony of Tangkhul is just as valuable as that of Lushai, and we may pinpoint the proto-final's length even in the absence of a Lushai cognate. Thus, **aŋ*>TN *əŋ*, L *aŋ* ([55] 'dream' TN *məŋ*, L *măŋ*) vs. **a·ŋ*>TN *aŋ*, L *aaŋ* ([56] 'black' TN *haŋ*, L *hàaŋ*):

**ap*>TN *əp*, L *ap* ([57] 'snot' TN *nəp*, L *hnap* vs. **a·p*>TN *ap*, L *aap* ([58] 'flutter/wave' TN *yap* 'call by waving the hand', L *za·p* 'fan, winnow, flap, flutter'):

**uk*>TN *u*, L *uk* ([59] 'six' TN *thəru* L *pà-rùk*) vs. **u·k*>TN *uk*, L *uup*[41] ([60] 'knee/angle' TN *khuk*, L *khûup*, WT *khug*):

**al*>TN *əy*, L *al* ([61] 'forehead' TN *khəwəy*, L *càl*, WT *dpral*, Tiddim Chin *tal*) vs. **a·l*>TN *ay*, L *aal* ([62] 'filth/excrement' TN *pay*, L *bàal*):

**or*>TN *uy*, L *or* ([63] 'horse' TN *si-kuy*, L *sà-kŏr*) vs. **o·r*>TN *or*, L *oor* ([64] 'peel/husk' TN *kor*, L *kóor*), etc.

Secondary vowels: Some of the modern Tangkhul vowels are demonstrably of quite recent,

40) In four cases we have discovered, *-aw* or *-ow* in other languages correspond to TN *uy*. For these sets we tentatively reconstruct **ow*: (45) 'soft/tender' **now*>TN *nuy*, L *nŏw*, WB *nû*; (46) 'awake' **m-sow*>TN *thuy*, L *thŏw*, Dimasa *masau*, Lakher *pətheu*; (47) 'fry' **r-ŋow*>TN *ŋuy*, Jg. *kəŋaw* (cf. WT *rŋod*); (4) 'head' *m-gow*—**s-gow*>TN *kúy*, Digaro *mkau*, WT *mgo*, Dimasa *səgau*, Ga. *sgo*.

41) We assume a pre-Lushai development of **uuk*>*uup*, with assimilation of the final stop to the roundedness of the vowel.

secondary origin. There are so far no good etymologies for TN open syllables ending in *-u* or *-ə*, or for the diphthongs *-əw*, *-ew*, *-oy*. Occupying an intermediate historical position are the TN mid-vowels *e* and *o*. These can sometimes easily be shown to derive from **ya* and **wa*, respectively. Thus the rhyme **ak*>TN *ək* if there is no preceding glide ([65] 'difficult' **tsak*>TN *sək*, L *sàk*), while **yak*>TN *ek* ([66] 'lick' **m-lyak*>TN *mərek*, L *liak*), and **wak*>TN *ok* ([31] 'pig' **pwak*>TN *hòk*, L *vòk*). These *e*'s and *o*'s we may call 'secondary mid-vowels'. In at least one case, however, the mid-vowel seems to be primary as far back as one can trace. Thus (15) 'scratch/scrape' **kret*~**ket*>TN *khet*, Jg. *məkhrèt*, WB *khrac*[42] (contrast, e.g. 'eight' [35]). And yet in one other set, even though other languages point to a primary **e*, Tangkhul has a shwa: (67) 'kick' **r-tek* or **r-dek*>WT *rdeg*, Ga. *ga-tek*, Lh. *thêʔ*,[43] but TN *thək*. Clearly this is an area where more work is needed, and where Tangkhul can make a valuable contribution.

Final -s. The correspondence of a Tangkhul open vowel to a Lushai final *-ʔ* under the low tone is an excellent indication that a final **-s* was present.[44] In several cases the **-s* is overtly attested elsewhere: (68) 'bone2' **rus*>TN *ru*, L *rùʔ*, WT *rus*, Jg. *ǹrút*; (69) 'two' **g-nis*>TN *khəni*, L *pà-hnìʔ*, WT *gnyis*; (70) 'seven' **s-nis*>TN *śini*, L *pà-sà-rìʔ*, Jg. *sənìt*, Kanauri *stis*; (71) 'feed/food' **dza-s*>TN *za* 'eat', L *fàʔ* 'feed with the mouth', WT *zan*~*zas* 'food'. In other cases we may set up **-s* on the basis of the TN zero/L `ʔ correspondence alone: (72) 'leaf' **s-nas*>TN *a-na*, L *hnàʔ*; (73) 'rain' **rwas*>TN *ró* (v.), L *ruàʔ* (n.), WB *rwa* (v.); (74) 'chew/bite' **s-ris*>TN *śəy*, L *sèʔ*; (75) 'thick' **ʔtsas*>TN *śá*, L *chàʔ*.

3. Proto 'word-families' and TN rhyme-alternations.

Bhat's phonetic accuracy, and his arrangement of words by root-syllable make it easy to uncover examples of phonological variation within the same morpheme, of the sort that characterizes what Sino-Tibetanists have traditionally called 'word-families'. The most interesting of these involve final consonants.[45]

a) Nasals varying in point of articulation: *-m* ~ *-n* (*athom* 'sprout (n.)' ~ *reython* 'to sprout'); *-ŋ* ~ *-n* (*khəməŋ* 'drink' ~ *kəśimən* 'cause to drink'; *məŋ* 'dream (n.)' ~ *kəśimən*

42) WB *ac* may thus sometimes derive from **et*, as well as from **is* ('seven' **s-nis*>WB *hnac*) and **ik* ('joint' **ʔtsik*>WB *chac*). **i·t* evidently became WB *it* ('reap' **ri·t*>WB *rit*, L *rîit*.

43) **ek* merged with **at* in Lahu (cf. 'flower' **wat*>Lh. *vêʔ*).

44) The mysterious but intimate connection between *s* and glottality has most recently been pointed out by the reviewer in connection with syllable-initial consonants (Matisoff 1969, 1970).

45) Alternations among initial consonants are less numerous, though occasionally striking: 'left side' *wuy* ~ *yuy* (both in Bhat) ~ *phui* (P). Vocalic alternations sometimes reflect proto-hesitation between a long and short vowel: **i* ~ **iy*>TN *i* ~ *əy* ('twist' *khəri* ~ *ŋərəy*): **aC* ~ *a·C*>TN *əC* ~ *aC* (*rəm-sa* 'wild animal' ~ *ram-huw* 'wolf' ['wild dog']; *ŋəŋ* ~ *ŋaŋ* 'smell'; *kəhat* 'saw/reap' ~ *kəcihət* 'make to saw or reap'; *yak* ~ *yək* 'twist', etc.). Other sporadic types of alternation involve vowel quality: *nim* 'humble' ~ *nem* 'low'; *khək* ~ *khok* 'peel'; *thət* 'kill' ~ *kəcithit* 'cause to kill'. In this last example it looks as if the last vowel is harmonizing with the *i* of the causative morpheme *ci*.

'to dream'; *khəŋətəŋ* 'get back pawned articles' ～ *aŋətàn* 'money paid to get back pawned object'; *kəsəŋ* 'be appointed' ～ *kəcisən* 'appoint, make a member'; *kəśaŋ* 'be cool' ～ *khəməśán* 'cool something'; *khəyuŋ* 'be stale' ～ *khəphəyun* 'make stale'; *then* ～ *theŋ* 'to dry (v.i.)'; *kəthəŋ* 'to dawn, day' ～ *ziŋthən* 'dawn'). The change to a dental nasal in the causative of simplex/causative verb-pairs suggests assimilation to a since-lost causative suffix, perhaps *$-s$.

b) Variation between homorganic stop and nasal: *khəp* ～ *khəm* 'prevent'; *nəm* 'to smell' ～ *nəp* 'nasal mucus', etc.

c) Variation between $-r$ and $-y$: *khəràr* 'expose to the sun' ～ *khəŋərày* 'expose oneself to sun'.[46]

d) Variation between final dental stop/nasal and $-y$: *khəməthuk*～*kəthuy* 'wake someone up'; *kəsut* ～ *kəsuy* 'pull out'; *ŋəŋ*/*ŋaŋ* ～ *ŋəy*/*ŋay* 'smell'; *khərən* ～ *khərəy* 'chop off'.

e) Variation between open syllables and final stops/nasals: *kəśa* 'hear' ～ *kəśán* 'announce' ～ *kəcišat* 'make hear, announce'; *mərė* 'tongue' ～ *khəmərek* 'lick'; *kəta* 'go down (on land)' ～ *kətak* 'come down and pick up (birds)'; *ma* 'paddy' ～ *maŋ-taysay* 'ripening paddy plant'; *khəra* ～ *khəŋərat* 'copulate (animals)': *aŋəni* ～ *aŋənit* 'full moon'; *za* 'eat' ～ *zat* 'food'.[47]

Elucidation of these relationships (e.g. to what extent they reflect the blind workings of universal phonetic phenomena, as opposed to quasi-systematic morphophonemic relationships in the proto-language) is, along with a more precise attack on the prefix problem, one of the chief desiderata of Tibeto-Burman studies. The time is rapidly approaching when a serious etymological dictionary of Tibeto-Burman will be possible. Much premature worrying about the 'irregularity of sound-change'[48] will be avoided once we understand better the complex interrelationship between phonological and morphological variation through time. As an example of the involved word-families we shall have to set up, we offer (76) 'winnow/fan/wave/paddle'[49] (an etymon for which Tangkhul has preserved three variants): **g-ya·p*>TN *khayap* (P) 'call by waving the hand', WT *yab-mo* ～ *gyab-mo* 'fanning, waving', WB *yap* 'fan', L *za·p* 'fan, winnow, flap, flutter', Mikir *hi-dźap* 'id.' ～ **g-ryap*>WT *hkhrab* 'to winnow, fan', Jg. *kətsàp* 'id.' ～ **g-ryam*>TN *kəhəm* 'winnow' ～ **g-rya*>Lh. *ha* ～ *a* 'winnow', Pwo, Sgaw Karen *xaˀ* 'id.' ～ **g-ray* (?)>WB *hlė* 'winnow', TN *kəhəy* 'separate rice from husk'. In all such cases we must steer an Aristotelian middle path between a dangerous speculativism and a stodgy insensitiveness to the workings of variational phenomena in language history.

46) This r ～ y alternation also shows up syllable-initially: *yəŋkəśi* 'enemy' ～ *aŋərəŋ* 'enmity'.

47) The dental nominalizing suffix is one of the most solidly reconstructible grammatical morphemes in Tibeto-Burman. See Wolfenden 1929 and Benedict 1940.

48) A concept persuasively advanced in the last few years by William S-Y. Wang and his students. See for example POLA No. 12, 1971.

49) Part of this set appeared as (58) above.

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